iDirect Dialog Training Syllabus NCPA + NCOP R2.5.x

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Proprietary Notice

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1 The Academy – Your learning yourney

1.1 The Academy

The Academy, an iDirect cooperation between Global Services and HR department, offers training to design, operate and manage satellite networks using our product lines. Our programs are designed to keep our customers and partners up to date on the latest product releases and technology developments. It gives our customers and partners the confidence and experience to design, install, configure, manage and troubleshoot networks build with our ST Engineering iDirect product lines. Customers and partners will see a reduction in OPEX, more motivated staff by providing training and certification and faster and highly valued end user support. Well trained professionals are key in the successful implementation, delivery and operation of end to end services for your organisation and its end users.

Our Mission is to promote continuous learning to our customers, partners, employees and teams by offering qualitative learning opportunities worldwide. To support our mission, we focus on three aspects to ensure high quality training and certification programs, which align with the actual needs of our customers.

Hands-on: Training & certification programs are not only theoretical approaches but also focus on the hands-on knowledge and skill set development. The goal is to teach the practical approach, a hands-on mentality that enables the student to act directly after the training on the network in place. Not only our programs but also our instructors have a very hands-on oriented

mentality and are trained, supported by the needed theory, by hands-on actions and activities. All instructors have broad field experience, gained withing different departments within iDirect.

Expertise: The programs are focused on building and extending the student's expertise, being it on technology level or on product level, focusing on the different business roles of the student, being operational, design or implementation. Through many years of field expertise with our products and technologies in real life situation, our instructors have the needed expertise to transfer the knowledge covered in the training and certification programs towards the students.

Certification: To be able to measure the success rate of the training program, students can participate to an online, in some cases even practical, certification test. This industry recognized certificate proves that the student gained the targeted knowledge and expertise and is ready for its designated tasks. Our instructors from their side follow a controlled certification process, where they will go through different phases of internal and external training that will qualify them as an instructor for a given program.

1.2   Why invest in training & certification

Benefit for your customers

Our industry is knowledge-driven and demands up-to-date skills and training on existing and emerging technologies for its professionals. The Academy Training and Certification Program enables you to provide the best level of service to your end customers.

Benefit for your business

Increase efficiency by making expertise available to your business.
The Academy Training and Certification Program creates confidence in the marketplace by providing you with a pool of certified individuals. Establish a standard of quality and excellence recognizable throughout the industry.

Benefit for your Engineers

The Academy trained and Certified Associates, Professionals, and Experts represent a new breed of technology professionals uniquely equipped to create value with ST Engineering iDirect's product-based solutions. The program outlines a path of continuing education to help elevate their professional career and expand your abilities to deploy effective solutions.

1.3   A full learning experience.

Throughout the different training and certification programs, The Academy helps to have the best possible learning experience. All training programs, a mix of theoretical lectures and hands-on exercises, are build in a sequential way, allowing for all participants, independent of the level of experience, to step in and further develop their knowledge and skills. Starting with the basics of each technology and product line, allowing all students to have the full understanding from start, without skipping any subjects. After these basic training and certification programs, a more detailed and advanced level of training programs can be taken, covering different topics, focussing on specific technologies, and covering different business roles the students have.

During the training and certification programs, the students all get their individual secured VPN access to one of the training networks, located at our different training centres worldwide. Our training networks are updated to the latest product releases and are a combination of real equipment and simulated tools.

Next to the training networks, access to a Learning Management System is provided as well. Additional documents can be found there during the training program. At the end of each training program, an evaluation survey and online test is done throughout our Learning Management System. The online test, a combination of true/false and multiple-choice questions, stays available until fourteen (14) days after the end of the training program, allowing the students to revisit their learning materials and prepare for the test, when desired.

The learning experience, however, does not end after these initial set of training programs. At moments of major software releases or product updates, a dedicated delta training program can be followed, which allows students to keep up to date with the latest technology developments and product releases. In this way, your learning experience is a long-term trajectory, where an appropriate training program is available for anyone, being new to or experienced with our technologies and products.

1.4   Training delivery

1.4.1   Public and dedicated.

The Academy provides training & certification programs in both public and dedicated sessions. Public sessions are accessible for all customers on a per seat basis. We publish twice a year our calendar indicating when and where these public sessions are taking place. The benefit of these public sessions is the quick registration and planning process, where in case of new staff members, they can sign up quickly to one of the training and certification programs to get up to speed. Check out our website to find exact dates and locations of these public sessions.

Next to public sessions, on demand dedicated session are being organized. The added value is to have a full group registered for a session, where it can be organized at your location, making it cost and time efficient. Implementation and configuration topics on the specific use case can be handled shortly, giving an extra advantage.

1.4.2   Classroom and online

Besides some exceptions, all training and certification programs can be delivered in both online or classroom format, allowing for the best possible fit for our customers and partners. In all cases, secured remote VPN connection is setup for each student towards one of our training networks, located in the different training centres around the world. In this way we guarantee the best possible practical and hands-on experience. Each trainee will be given an instructional manual that contains all the slides covering the material presented, lab books outlining the hands-on exercises to be conducted by the trainee, and any additional reference material used or referred to during the training program.

1.4.3   Fixed and customizable

The content and outcome of the different training and certification programs is fixed and independent of the delivery format (classroom or online). However, The Academy applies a 20/80 rule, where about 80% of the content of the programs are fixed, and 20% can be tailed according to your specific needs. This allows to cover use case and customer specific topics, in line with the training program, and increases in this way the added value of your training experience.

At any time, the training and certification program is updated in line with the major product releases and follows the release plan of our products.

Would however the need arise for customized training, we can build these type of training programs thanks to the modular approach of our standard training programs, where we can easily add or remove certain training modules.

1.5   Basic satellite communication knowledge

Although the different training and certification programs all start with the basic level, it is recommended for the students to have some understanding of satellite communication to be able to get the maximum out of the training and certification program. Next to knowledge on satellite communication, some basic knowledge on IP Networking and command line interfacing with devices like switches and servers is recommended.

For every student to the basic level training programs, we offer two online training modules, being, Satellite Communications and Data Communication, accessible through our Learning Management

System. Going through these modules will provide you the needed background knowledge to start the different training and certification programs.

2 The Academy – Our training portfolio

2.1 Dialog Certified Product Associate (NCPA) & Dialog Certified Operations Professional (NCOP)

LEARNING OBJECTIVES

Upon completion, trainees will be able to clearly define and explain the different terminologies, components, and technologies and map them to a Dialog based network.

TARGET GROUP

Anyone new to ST Engineering iDirect Dialog products, including solutions, operations, and implementation engineers, and NOC operators.

PREREQUISITE TRAINEE SKILLS

As indicated in section 1.5 Basic satellite communication knowledge

Trainees must have first followed the Foundation Level - iDirect Dialog Certified Product Associate training before progressing to the Professional Level.

COURSE OUTLINE

In the NCPA section of the course, the trainer will explain the basic functionalities and features available in the iDirect Dialog HUB. The HUB6501 (1IF), HUB6504 (4IF), and HUB7208/7303 (XIF) will be explained and the trainee will get an introduction to the different technologies used.

The trainer will show the management interfaces of the iDirect Dialog HUB and will clearly outline how exactly Dialog works. The trainee will get some insight into how the entire network is monitored and controlled.

The NCOP part of the course provides the knowledge and skills needed to operate and monitor an iDirect Dialog hub system. It guarantees that the iDirect Dialog Certified Operations Professional can perform the different tasks to ensure the daily operations of the service network. This course will ensure the

capabilities of the trainee to perform appropriate level 1 support and even evolve to level 2 support by adding more practical experience.

The different features and technologies shown in the NCPA program will be more detailed and more focused on the different operational aspects. In addition to the theoretical background, the NCOP program is a hands-on focused training where each trainee will be able to login into a training iDirect Dialog network and work through the different configuration exercises as described in the available lab guides.

The following subjects will be covered in the 5-day training program:

- NCPA 2500 – Program Overview
- NCPA 2510 - Dialog Introduction: a birds eye view of the Dialog Platform
- NCPA 2520 - Dialog Architecture: An overview of the hardware components of a Dialog Platform (NMS, Hub Module and terminal) and the architecture of how things work together
- NCPA 2530 - Dialog Management Tools: The tools used to configure and monitor Dialog
- NCOP 2540 - Dialog Satellite Resources: Creating a new Satellite Network (satnet) in Dialog
- NCPA 2550 - Dialog Access Technologies: How Dialog sends data over satellite with a focus on the different return technologies
- NCOP 2551 - HRC: A deeper dive into the HRC return technology
- NCOP 2553 - MRC: A deeper dive into the MRC return technology
- NCPA 2560 - Dialog QoS: Bandwidth allocation for terminals with service profiles and classification profiles
- NCPA 2570 - Dialog Network Topologies: How Dialog extends Ethernet and IP networks over satellite
- NCOP 2580 - Dialog Terminal Commissioning: Bring a new terminal online.
- NCOP 2590 - Level 1 Remote Troubleshooting: A systematic approach to investigate and solve terminal related problems

3 The Academy – Daily agenda

3.1   NCPA - NCOP*

Time	Day 1	Day 2	Day 3	Day 4	Day 5
9:00 Am - 10:30 Am	NCPA 2400 - Program overview NCPA 2410 - Dialog Introduction	NCPA 2450 - Dialog Access Technologies	NCOP 2460 - Dialog Qos	NCOP 2480 - Dialog Terminal Commissioning	NCOP 24210 - Dialog Hands-on Exercises
Break (30 Min)					
11:00 Am -12:30 PM	NCPA 2410 - Dialog Introduction (Cont'd)	NCPA 2450 - Dialog Access Technologies (Cont'd)	NCOP 2460 - Dialog Qos (Cont'd)	NCOP 2490 - Dialog Terminal Provisioning	NCOP 24210 - Dialog Hands-on Exercises (Cont'd)
Lunch Break (1 H)					
1:30 PM - 3:00 PM	NCPA 2420 - Dialog HUB Architecture	NCOP 2450 - Dialog Satellite Resources	NCOP 2470 - Dialog Network Topologies	NCOP 24100 - Level 1 Remote Troubleshooting	NCOP 24210 - Dialog Hands-on Exercises (Cont'd)
Break (30 Min)					
3:30 PM - 5:00 PM	NCPA 2440 - Dialog Management Tools	NCOP 2450 - Dialog Satellite Resources (Cont'd)	NCOP 2470 - Dialog Network Topologies	NCOP 24100 - Level 1 Remote Troubleshooting (Cont'd)	Online Certification test

Figure 1: iDirect NCPA NCOP Daily schedule

*The schedule outlined above is an example. Exact timings will be provided in the Course Enrollment Notification email.

4 Practical Information

4.1 Course Delivery

The training program will include both theoretical (classroom) and practical (hands-on) chapters, possibly complemented by live demonstration and eLearning modules (if applicable).

Classroom Training

Classroom training will be provided to the customer and comprises in-depth theoretical sessions. Due consideration is given to ensuring that interaction between the trainer and trainees forms an integral part of the training session. Immediate feedback and support are given.

Hands-On

During the hands-on parts of the training, the different trainees will be able to connect to training equipment prepared for the specific hands-on exercises addressed in the training.

4.2 Laptop Requirements

Each trainee attending the iDirect Dialog NCPA + NCOP training session must bring a laptop with a browser and ssh client (e.g., PuTTY) installed.

4.3 VPN

Access to the Dialog training network can only be executed once VPN access has been enabled. Download and installation of Global Protect VPN Client will be necessary to connect to the iDirect Dialog Training network. Instructions are shared in the Course Enrolment Confirmation email.

4.4 Online Learning Management System

Each student will receive his personal account on our Learning Management System. Via http://myacademy.idirect.net, each student will see his personal learning plan. Potential pre-reading documents, online certification tests and surveys will be conducted through our Learning Management System. The credentials are the same as for any other STE iDirect online tooling. In case the student does not have any valid user, the user will automatically be created.

4.5 Attendance

Maximum number of trainees for classroom training is twelve (12) unless otherwise stated in the training program description.

A daily schedule will be agreed upon prior to the start of the training program and in consultation with customer training coordinator.

4.6   Language

All training material will be provided in English. Presentations will be given in English unless otherwise agreed.

4.7   Location

The described training program can be conducted in any of the ST Engineering iDirect training centers, at the customer's location if requested, or through live virtual classroom sessions.

4.8   Travel Conditions

In the event that travel to a specific country is not advised by the Belgian "Ministry of Foreign Affairs", depending on alert levels, the training event could be postponed or cancelled at ST Engineering iDirect's discretion.

5   Cancellation Policy

5.1   Commercial Conditions

STE iDirect standard terms and conditions apply.

5.2   Cancellations, Transfers, and Non-Attendance

Any cancellations and requests to transfer must be made in writing by emailing theacademy@idirect.net.

Transfers

there is no charge for transferring to an alternative program, provided the price of the alternative program is equal to the originally requested program and provided the request is received 30 or more days before the start of the program. The schedule of the alternative program is to be mutually agreed upon.

(a) Requests to transfer received 20-29 days before the start of the program will be subject to a transfer fee of 20 per cent of the program fees.

(b) Requests to transfer received 10-19 days before the start of the program will be subject to a transfer fee of 30 per cent of the fees.

(c) Requests to transfer received 0-9 days before the start of the program will be subject to a transfer fee of 50 per cent of the fees.

Cancellations

There is no charge for cancellations received 61 or more days before the start of the program.

(a) Cancellations received 29-60 days before the start of the program are subject to a cancellation fee of 25 per cent of the fees.

(b) Cancellations received 15-28 days before the start of the program are subject to a cancellation fee of 50 per cent of the fees.

(c) Cancellations received 0-14 days before the start of the program are subject to a cancellation fee of 100 per cent of the fees.

No Shows

No Shows, defined as less than 1-day notice, are subject to a cancellation fee of 100 per cent of the fees.